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09/156,461	09/05/2000	HONGYONG ZHANG	SEL-112	1127

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EXAMINER	
SELBY, GEVELL V	
ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/156,461	ZHANG ET AL.	
	Examiner	Art Unit	
	Gevell Selby	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *1-8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-15,21,22,24,25,27 and 28* is/are rejected.

7)☒ Claim(s) *16-20,23,26 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 1998* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 9/5/2005 & 12/22/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 1-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group I, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/22/04.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 17-20, 23, 26 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 17 recites the limitation "said pixel matrix" in line 13. There is insufficient antecedent basis for this limitation in the claim. It is unclear whether the "said pixel matrix" reference refers the display or the image sensor. In order to continue the examination of the claim, the term "pixel" will be replaced with "display".

5. Claims 18-20, 23, 26, and 29 are also rejected based upon their dependency from rejected claim 17.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 9-15, 21, 22, 24, 25, 27, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaifu et al., US 5,812,109.

In regard to claim 9, Kaifu et al., US 5,812,109 discloses an image sensor integrated type active matrix type display device which is an active matrix type display device comprising over a same substrate:

a display matrix (see figure 3) having a plurality of pixel electrodes (see figure 3, elements D11-D33 and column 6, lines 7-11), a plurality of select lines and a plurality of signal lines, wherein said select lines and said signal lines are arranged in a shape of a lattice (see figure 3, elements g1-g3 and SIG); and

an image sensor (see figure 3-4B) laminated with a light receiving unit for converting light into electric charge and a signal reading unit for reading the electric charge generated at the light receiving unit as a signal in a light receiving pixel region in which a plurality of light receiving pixels are arranged (see column 5, lines 35-67);

wherein the light receiving unit includes a plurality of lower electrodes separated from each other at respectives of the light receiving pixels (see figure 3, element G and column 5, lines 35-37), a photoelectric conversion layer and an upper electrode common to the light receiving pixels;

wherein the upper electrode is connected to a lead-out terminal on a light incident side (see figure 3: The upper electrodes (G) connect to the signal lines SIG which connects to the lead out terminals at M1, M2, and M3);

wherein the lead-out terminal is formed at a layer the different from a layer of upper electrode (see figure 4A and B).

In regard to claim 10, Kaifu et al., US 5,812,109 discloses the image sensor integrated type active matrix type display device according to claim 9 wherein the lead-out terminal is formed by a starting film the same as a starting film of the pixel electrodes (see column 7, lines 33-42: A portion of the electrode constitutes part of the terminal so they are made up of the same film for at least that portion).

In regard to claim 11, Kaifu et al., US 5,812,109 discloses the image sensor integrated type active matrix type display device according to claim 9 wherein the lead-out terminal is connected to a second lead-out terminal (see figure 3, element Vout) comprising a starting film the same as a starting film of either of the select lines and the signal lines (see column 7, lines 13-42).

In regard to claim 12, Kaifu et al., US 5,812,109, discloses an image sensor integrated type active matrix type display device which is an active matrix type display device comprising over a same substrate:

a display matrix having a plurality of pixel electrodes (see figure 3, elements D11-D33 and column 6, lines 7-11), a plurality of active elements connected to said pixel electrodes respectively (see figure 3, elements D11-D33 and T11-T33), a plurality of select lines and a plurality of signal lines, wherein

said select lines and said signal and lines are arranged in a shape of a lattice (see figure 3, elements g1-g3, SIG, S1-s3);

an image sensor (see figures 3-4Blaminated with a light receiving unit for converting light into electric charge and a signal reading unit for reading the electric charge generated at the light receiving unit as a signal in a light receiving pixel region in which a plurality of light receiving pixels are arranged (see column 5, lines 35-67);

wherein the display matrix includes an electrode layer covering at least the signal lines and the select lines (see figure 4B, element 83 and column 7, lines 32-35);

wherein the light receiving unit includes a plurality of lower electrodes separated from each other at respectives of the light receiving pixels (see figure 3, element G) and formed by a starting film the same as a starting film of the electrode layer, a photoelectric conversion layer and an upper electrode common to the light receiving pixels (see column 7, lines 23-42);

wherein the upper electrode is connected to a lead-out terminal on a light incident side (see figure 3: The upper electrodes (G) connect to the signal lines SIG which connects to the lead out terminals at M1, M2, and M3);

wherein the lead-out terminal is formed at a layer different from a layer of the upper electrode (see figures 4A and 4B).

In regard to claim 13, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 12 wherein the lead-

out terminal is formed by a starting film the same as a starting film of the pixel electrodes (see column 7, lines 33-42: A portion of the electrode constitutes part of the terminal so they are made up of the same film for at least that portion).

In regard to claim 14, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 12 wherein the lead-out terminal is connected to a second lead-out terminal (see figure 3, element Vout) comprising a starting film the same as a starting film of either of the select lines and the signal lines (see column 7, lines 13-42).

In regard to claim 15, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 12 wherein the lead-out terminal is connected to a second lead-out terminal (see figure 3, element Vout) comprising a starting film the same as a starting film of the electrode layer (see column 7, lines 13-42).

In regard to claim 21, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 9 wherein peripheral circuits connected to the signal reading unit are installed on the substrate and the lead-out terminal is formed to surround at least portions of a periphery of the light receiving matrix excluding portions thereof connected to the peripheral circuits (see figures 13 and 14 and column 16, lines 48-67).

In regard to claim 22, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 12 wherein peripheral circuits connected to the signal reading unit are installed on the substrate and

the lead-out terminal is formed to surround at least portions of a periphery of the light receiving matrix excluding portions thereof connected to the peripheral circuits (see figures 13 and 14 and column 16, lines 48-67).

In regard to claim 24, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 9 wherein the photoelectric conversion layer is patterned with the upper electrode as a mask (see column 7, lines 15-22: It is inherent the upper electrode serves as a mask for the photoelectric conversion layer because the layer under it will not be removed in the etching process).

In regard to claim 25, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 12 wherein the photoelectric conversion layer is patterned with the upper electrode as a mask (see column 7, lines 15-22: It is inherent the upper electrode serves as a mask for the photoelectric conversion layer because the layer under it will not be removed in the etching process).

In regard to claim 27, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 9 wherein the signal reading unit is formed by thin film transistors (see figure 3, elements T11-T33 and column 5, lines 46-48).

In regard to claim 28, Kaifu et al., US 5,812,109, discloses the image sensor integrated type active matrix type display device according to claim 12 wherein the active

elements and the signal reading unit formed by thin film transistors (see figure 3, elements T11-T33 and column 5, lines 46-48).

Allowable Subject Matter

8. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 17 and corresponding dependent claims 18-20, 23, 26 and 29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

10. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claims 17-20, 23, 26, and 29, the prior are does not disclose the combination of limitations of the claimed invention, specifically the limitations of:

"active elements formed over the substrate and connected to the signal lines and the select lines;

a first insulating film covering the active elements;

an electrode layer formed on the first insulating film and covering at least the signal lines and the select lines;

a second insulating film formed on the electrode layer; and

pixel electrodes formed on the second insulating film and connected to the active devices" as claimed in claim 17.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure US 6,295,390, discloses a two-dimensional image input unit disposed on one surface and a display disposed on the opposite surface of the device;

US 5,313,055, discloses a two-dimensional image read/display device;

US 5,491,566, discloses an integrated input-output device for a data communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on 571-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs

TUAN HO
PRIMARY EXAMINER